

This property which the bicarbonate of potassa possesses of decomposing the phosphates, is only available in qualitative examinations; as the conversion into carbonate is only partial. The use of the salts of lead in freeing the earths from phosphoric acid requires much time and attention; whereas the process here recommended, occupies but a few minutes, and though not so complete in its effects, answers completely to distinguish the earths when combined with the phosphoric acid.

G. O. REES.

LXXIII. Descriptions of several new British Forms amongst the Parasitic Hymenopterous Insects. By J. O. WESTWOOD, F.L.S. &c.*

[Concluded from vol. i. p. 129.]



17. *Monodontomerus*, Westw. *Torymus*† B. a. Dalm.
Torymus? Walk.

CALLIMOMI Spin. affinis. Differt præcipuè collari majori transverso (fig. 2.) femoribusque posticis crassioribus, nec serratis, subtùs dente unico paullò ante apicem armatis (fig. 1.). Clava antennarum quàm articulis duobus præcedentibus vix brevior. Ramus stigmatalis ut in *Callimome*. Mesoscutum suturis distinctis.—*Monod. obscurus*, Westw. Viridi-æneus, abdomine suprà chalybeo cupreoque nitenti, subtùs saturatè fulvescenti, segmento basali viridi; femoribus piceis, in medio æneis, tarsis tibiisque fulvis, his in medio obscurioribus; alæ sub stigmate obscuriores stigmate fusco. Antennæ nigræ, scapo piceo-fulvescenti, oviductus abdominis longitudine. Long. Corp. $1\frac{1}{3}$ lin. Variat paullò major, colore fulvescenti subtùs magis diffuso. Ensham, August 1826. Warwick, August 1827.

18. *Mesopolobus*, Westw.

Pachylarthro Westw. affinis. Caput thorace latius, antennæ sensim clavatæ 13-articulatæ, articulo 3tio annuliformi, 4to majori. Mandibulæ 3—4-dentatæ. Palpi maxillares furcati (fig. 4.). Tibiæ intermediæ ferè ad apicem externum lobo parvo triangulari ciliato. Thorax elongato-ovatus. Abdomen parvum angustum depressum. ♀ ignota.—*Mes. fasciventris*, Westw. Lætè viridis, abdomen nigrum, chalybeo cupreo viridique nitens, fasciâ fulvâ ante medium; antennis fulvis, pedibus flavis, tarsis apice fuscis, tibiarum lobo

* Communicated by the Author.

† Obs. Nomen "*Torymus*" omninò respuendum.

nigro. Alæ hyalinæ apice areolæ costalis ramoque stigmatali fuscis. Long. Corp. $\frac{3}{4}$ lin. Coombe, May 1827. Birmingham, August 1827. Windsor, July 1830.

19. *Platymesopus*, Westw.

Mesopolobo Westw. affinis. Differt præcipuè palpis maxillaribus non furcatis articulo 2do magno dilatato 4toque longissimo. Tibiæ intermediæ sensim dilatatæ ferè ad apicem, angulo externo apicali in fasciculum parvum terminato (fig. 5.). Tibiæ anticæ etiam paullò dilatatæ. Abdomen ovatum depressum thorace multò minus; antennarum clava magna. ♀ ignota.—*Plat. tibialis*, Westw. Viridis, abdomen nigrum subcupreo nitens; antennæ fulvæ, basi flavæ, apice fuscæ; pedibus flavis, tarsorum apice fusco, femoribus tibiisque intermediis lineâ fuscâ, his etiam lineâ rubrâ, fasciculo apicali nigro; alarum nervi pallidè fuscescentes. Long. Corp. 1 lin. Coombe, April, May 1827—1828.—Obs. Speciem? majorem è Dom. G. T. Rudd accepi.

20. *Gastrancistrus*, Westw.

Caput transversum thorace latius. Antennæ mediocres apice crassiores 12-articulatæ, articulis 3 et 4 annuliformibus 5—9 cyathiformibus (fig. 6.). Abdomen elongato-ovatum, depressum, apice corniculis 2us recurvis; oviductu exserto, abdominis dimidio longitudine ferè æquante (fig. 7.). Alæ ramo stigmatali longo clavato. Tarsi pentameri, omnes simplices, pulvillis magnis.—*Gastr. vagans*, Westw. Thorax purpureus, abdomine æneo, basi viride; capite æneo-nigro; pedibus piceis, genibus pallidioribus, antennis nigris. Long. Corp. $\frac{3}{4}$ lin. Coombe, May 1827.—Obs. *Eupelmo* et *Callimomi*, oviductu exserto affinis. Ex illo tarsis simplicibus, ex hoc ramo stigmatali elongato antennisque differt.

21. *Trichogramma*, Westw.

Agonioneuro Westw. affinis. Caput breve, thoracis latitudine et illo arcuè applicatum. Antennæ breves, 6-articulatæ, articulo 1mo longo, 2do brevi gracili, 3tio quàm 2do majori crassiori; 4 et 5 brevibus, 6toque maximo oblongo-ovato apice acuminato (fig. 8.). Thorax ferè quadratus, posticè rotundatus, abdomine longior, scutello magno; abdomen breve, transversum, sessile, thoracis latitudine ferè ad apicem. Alæ anticæ magnæ pilosæ, ramo stigmatali elongato, pilisque in lineis circiter 12 longitudinalibus positæ. Pedes simplices. Tarsi ut mihi videtur 3-articulati, pulvillis magnis (fig. 9.).—*Trich. evanescens*, Westw. Fulvo-fuscescens, abdomine obscuriori, pedibus pallidioribus. Long. Corp. $\frac{1}{2}$ lin. Chelsea, June 11, 1828.—Obs. Omnium *Chalcididarum* minutissimus.

22. *Aprostocetus*, Westw.

Eulopho affinis. Caput thoraxque mediocres. Antennæ 8-articulatæ, articulis 2, 3, 4, et 5 longitudine æqualibus, at sensim paullò crassioribus, articulis 3 ultimis clavam crassiorem formantibus (fig. 10.). Abdomen elongatum, sessile, thoracis latitudine et illo duplò longius, ad apicem sensim acuminatum; oviductu exserto (parte exsertâ tertiam partem longitudinis abdominis æquante (fig. 11.). Tarsi tetrameri.—*Aprost. caudatus*, Westw. Nigro-æneus, abdomine æneo nitido, antennis pedibusque piceis, tarsis genibusque pallidioribus. Long. corp. ovid. incl. $\frac{5}{8}$ lin. Coombe, May 1827.

23. *Embolemus*, Westw.

Caput suprâ transverso-quadratum cum tuberculo antico (fig. 13.), in quo insident antennæ, quæ sunt 10-articulatæ, corpore longiores, filiformes, nudæ, articulo 1mo crassiori, 2do brevissimo, reliquis elongatis. Palpi maxillares longi, penduli. Thorax elongato-ovatus. Alæ superiores cellulâ 1 marginali unâque discoideâ rhomboideâ, cellulæ aliæ quædam etiam in-

dicantur (fig. 14.). Abdomen ovatum, convexum, posticè acuminatum. Pedes longi, graciles, femoribus crassioribus.—*Emb. Ruddii*, Westw. Niger, abdomine nitido, pedibus piceis, femoribus tibiisque in medio obscurioribus; alis subfuscescentibus. Long. Corp. $1\frac{1}{2}$ lin. Exp. alar. $3\frac{1}{2}$ lin. Yorkshire, Rev. G. T. Rudd.—Obs. Alarum nervi secundum typum *Alysiidarum* disponuntur, at antennæ caputque tuberculatum affinitatem cum *Proctotrupidibus* quibusdam demonstrant.

24. *Hemisius*, Westw.

Telenomo Hal. affinis. Caput thoracis ferè magnitudine. Antennæ in tuberculum parvum anticum positæ, longæ, ad apicem clavatæ, articulis 11-discretis, 3tio, 2do minori, clavâ 4-articulatâ (fig. 12.). Thorax convexus, rotundatus; alæ thorace toto vix longiores, ramo stigmatali elongato, clavato, in alæ discum obliquè descendentem. Abdomen ovatum, subdepressum, segmento 2do maximo.—*Hem. minutus*, West. Niger, abdomine piceo-nigro, pedibus flavescens, antennis piceis basi pallidis. Long. Corp. $\frac{1}{4}$ lin.

The Grove, Hammersmith, April 24, 1833.

LXXIV. On the Modulus of Elasticity of Gold. By B. BEVAN, Esq.

To the Editors of the Philosophical Magazine and Journal.

Gentlemen,

IT is something remarkable that while the modulus of elasticity and stiffness of a number of the common metals have been investigated and determined, that of gold, which is considered the most valuable metal, should have been neglected, or overlooked. To supply this defect I have lately obtained a piece of pure gold, and have ascertained the measure of its elastic force to be about 11,690,000 pounds to the square inch, or 1,390,000 feet when recently drawn into wire, or about 1,000,000 feet lower than the modulus of platinum, and 5,000,000 feet less than that of plate-glass. I suspect, however, that the modulus of gold as alloyed for coinage, is something higher than that of pure gold; but at present I have not been able to procure a piece of suitable dimensions to demonstrate it.

Those who are in the daily habit of taking gold coin soon acquire a knowledge of the proper sound or note given upon striking a piece of money upon a table or hard substance: this well-known though undefined note or sound depends upon the modulus of elasticity of the metal, as well as upon the diameter and thickness. A piece of coin, of the same dimensions, both as to diameter and thickness, of silver, will give a note about a major fifth higher than one of gold, when a similar coin of copper will give a note an octave above that of gold; and if made of steel would give a note a minor third above that of copper.